REMARKS

By this Amendment, claims 1, 6, 11 and 15 have been amended, and claims 20-23 have been added. Accordingly, claims 1-23 are pending in the present application.

Claims 1-19 stand rejected under 35 U.S.C. §103(a) being unpatentable over U.S. Patent No. 6,185,312 to Nakamura et al. in view of U.S. Patent No. 6,704,431 to Ogawa et al. Applicant respectfully traverses this rejection.

Claims 1-5

Among the limitations of independent claim 1 which are neither disclosed nor suggested in the prior art of record is an electronic watermark system for use in inserting an electronic watermark into a digital image which includes "control means for controlling a degree of insertion strength of the electronic watermark with reference to the data amount of the digital image per unit time by increasing the degree of the insertion strength of the electronic watermark when a data amount of the electronic watermark is decreased, and by lowering the degree of the insertion strength of the electronic watermark when the data amount of the electronic watermark is increased."

Support for this amendment can be found in the specification at page 11, lines 4-23. Briefly, the present invention takes into account a relationship between watermark insertion strength and an to detect to embedded watermark. Specifically, according to the present invention, the watermark strength is increased on detection of a small amount of the watermark and the watermark strength is lowered on detection of a large amount of the watermark. Because the degree of insertion strength of the electronic watermark is controlled based on the data amount of the watermark, the watermark strength is capable of being adjusted on insertion or embedding of the watermark in the digital image.

Accordingly, the detection strength of the watermark can be maintained and the reduction of the quality of the image can be suppressed.

As admitted on page 3 of the Office Action, Nakamura et al. neither teaches nor suggests controlling a degree of insertion strength of the electronic watermark based on the data amount of the digital image per unit time. The Office Action then relies on the teachings of Ogawa et al. for showing that the degree of insertion strength of the electronic watermark is controlled based on the data amount of the digital image per unit time. Applicant respectfully disagrees.

While Ogawa et al. teaches a method of embedding digital watermark data in digital data content, the disclosed method is very different from that of the present invention. Ogawa et al. provides that a change in the complexity of the digital data content will result in a change in the insertion strength of the watermark (column 3, lines 55 to 58). Specifically, when the complexity of the digital data content is increased the insertion strength of the watermark is correspondingly increased. Likewise, when the complexity of the digital data content is decreased, the insertion strength of the watermark is also decreased (column 15, lines 14 to 20). Therefore, inasmuch as Ogawa et al. teaches that the insertion strength of the watermark is increased or decreased along with a corresponding increase or decrease in the complexity of the digital data content, it teaches away from the present invention as defined in independent claim 1.

Therefore, even if one were to combine the teachings of Nakamura et al. and Ogawa et al., one would not arrive at the present invention as defined in independent claim 1. Accordingly, it is respectfully submitted that independent claim 1 patentably distinguishes over the art of record.

Claims 2-5 depend either directly or indirectly from independent claim 1 and include all the limitations found therein. Each of these dependent claims include additional limitations which, in combination with the limitation of the claims from which they depend, are neither disclosed nor suggested in the prior art of record. Accordingly, claims 2-5 are likewise patentable.

Claims 6-10

Among the limitations of independent claim 6 which are neither disclosed nor suggested in the prior art of record is a method of inserting an electronic watermark into a digital image which includes "controlling a degree of insertion strength of the electronic watermark in response to the measurement result signal to insert, into the digital image, the electronic watermark by increasing the degree of the insertion strength of the electronic watermark when a data amount of the electronic watermark is decreased, and by lowering the degree of the insertion strength of the electronic watermark when the data amount of the electronic watermark is increased."

As described above, neither Nakamura et al. nor Ogawa et al., either alone or combined, teach or suggest controlling a degree of insertion strength of the electronic watermark by increasing the degree of the insertion strength of the electronic watermark when a data amount of the electronic watermark is decreased, and by lowering the degree of the insertion strength of the electronic watermark when the data amount of the electronic watermark is increased. Accordingly, it is respectfully submitted that independent claim 6 patentably distinguishes over the art of record.

Claims 7-10 depend either directly or indirectly from independent claim 6 and include all the limitations found therein. Each of these dependent claims include additional limitations which, in combination with the limitations of the claims from which they

depend, are neither disclosed nor suggested in the prior art of record. Accordingly, claims 7-10 are likewise patentable.

Claims 11-14

Among the limitations of independent claim 11 which are neither disclosed nor suggested in the prior art of record is a method of inserting an electronic watermark into a digital image which includes "adjusting a degree of insertion strength of the electronic watermark on the basis of the data amount detected by increasing the degree of the insertion strength of the electronic watermark when a data amount of the electronic watermark is decreased, and by lowering the degree of the insertion strength of the electronic watermark when the data amount of the electronic watermark is increased."

As described above, neither Nakamura et al. nor Ogawa et al., either alone or combined, teach or suggest controlling a degree of insertion strength of the electronic watermark by increasing the degree of the insertion strength of the electronic watermark when a data amount of the electronic watermark is decreased, and by lowering the degree of the insertion strength of the electronic watermark when the data amount of the electronic watermark is increased. Accordingly, it is respectfully submitted that independent claim 11 patentably distinguishes over the art of record.

Claims 12-14 depend either directly or indirectly from independent claim 11 and include all the limitations found therein. Each of these dependent claims include additional limitations which, in combination with the limitations of the claims from which they depend, are neither disclosed nor suggested in the prior art of record. Accordingly, claims 12-14 are likewise patentable.

Claims 15-19

Among the limitations of independent claim 15 which are neither disclosed nor suggested in the prior art of record is an electronic watermark system for use in inserting an electronic watermark into a digital image, which includes "a control unit that controls a degree of insertion strength of the electronic watermark with reference to the amount of data per a unit of time of the digital image by increasing the degree of the insertion strength of the electronic watermark when a data amount of the electronic watermark is decreased, and by lowering the degree of the insertion strength of the electronic watermark when the data amount of the electronic watermark is increased."

As described above, neither Nakamura et al. nor Ogawa et al., either alone or combined, teach or suggest controlling a degree of insertion strength of the electronic watermark by increasing the degree of the insertion strength of the electronic watermark when a data amount of the electronic watermark is decreased, and by lowering the degree of the insertion strength of the electronic watermark when the data amount of the electronic watermark is increased. Accordingly, it is respectfully submitted that independent claim 15 patentably distinguishes over the art of record.

Claims 16-19 depend either directly or indirectly from independent claim 11 and include all the limitations found therein. Each of these dependent claims include additional limitations which, in combination with the limitations of the claims from which they depend, are neither disclosed nor suggested in the prior art of record. Accordingly, claims 16-19 are likewise patentable.

New claims 20-23 have been added to more fully cover the scope of the present invention. Consideration and allowance of claims 20-23 is respectfully requested.

In view of the foregoing, favorable consideration of the amendments to claims 1, 6, 11 and 15, favorable consideration of new claims 20-23, and allowance of the present application with claims 1-23 is respectfully and earnestly solicited.

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Respectfully submitted,

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